ABSTRACT

Title: Changes of stabilization ability and sensation of the foot after ankle injury by volleyball players

Objectives: To examine if volleyball players have any changes of stabilization ability and afferent function of the foot, using examination of stabilization ability and afferent function examination of the foot after ankle injury. To discover if any interrelated connections exist between stabilization ability and afferent function of the foot after ankle injury by volleyball players.

Methods: We used a single-leg stance to examine postural control. We performed a common neurological examination (two-point discrimination, graphestesia, kinesthesia and vibration sense) to examine afferent function – superficial sensation and deep sensation with two-point esthesiometer, tuning-fork, and blunt object.

Results: Stabilization ability after ankle injury using a single-leg stance examination deteriorated for 62.5% probands. Afferent function of the foot after ankle injury wasn´t significantly impacted. Only two-point discrimination in the middle of the instep injured foot (area Lisfranc joint) decreased by 62.5% probands. Graphestesia, kinesthesia and vibration sense examination didn´t show significant changes of afferent function after distorsion injury of the ankle. A change of stabilization ability and two-point discrimination in the middle of the instep injured foot was found simultaneously by 37.5% probands.

Keywords: ankle injury, stability, sensory examination, volleyball injury